

AMENDMENTS TO THE DRAWINGS:

Please substitute the attached replacement sheet for Sheet 7 of the drawings. Fig. 10B has been amended to indicate the use of an interference fit.

REMARKS

This Amendment addresses the matters remaining at issue from the outstanding final Office Action. Applicant respectfully requests favorable reconsideration of this application, as amended.

Fig. 10B has been amended to address the objection to the drawings.

In addition, the specification has been amended to avoid potential confusion in the disclosure of certain embodiments, particularly in relation to the presence of an interference fit and a minute gap. Referring to Fig. 2, for example, it is apparent that an interference fit is made between the rolling members 11 and contact portion 6a of the spider shaft 6, and that a minute gap S is present between the intermediate portion 6b of spider shaft 6 and the rollers 11. The amendments to the specification clarify these relationships.

In the outstanding final Office Action, each of independent Claims 8 and 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Kayser and Mangiavacchi patents, each taken individually.

In response to Applicant's prior arguments that Kayser and Mangiavacchi fail to disclose an interference fit as

claimed, the Examiner contended that the references show their respective rollers 24 and 4 held against gravity. The Examiner further asserted that such holding of the rollers could only occur if the rollers were interference fitted.

Contrary to the Examiner's contention, neither Kayser nor Mangiavacchi discloses its respective roller as being "held against gravity." The references provide no basis whatsoever to support the Examiner's contention in this regard. Indeed, the drawings in Kayser and Mangiavacchi do not represent any specific orientation of the disclosed devices. Therefore, it cannot be properly inferred that gravity would even be acting to urge the illustrative needles downwardly. Even assuming that the effect of gravity is relevant to the Kayser and Mangiavacchi drawings, there are other mechanisms besides interference fitting that could act to maintain the illustrative rollers in their respective positions. See, for example, the Remarks at pages 11-12 in the Amendment dated February 23, 2004. Thus, there is no basis to conclude that either reference discloses an interference fit.

Prior to Applicant's invention, accepted universal joint design practice involved the use of a minute clearance fit between the spider shaft and the needle rollers. Attached to this Amendment is an excerpt from the Universal Joint and

Driveshaft Design Manual published by The Society of Automotive Engineers, copyright 1979. Applicant invites the Examiner's attention particularly to the discussion at pages 62-65, describing various aspects of U-joint needle bearing design. Note especially the discussion relating to Fig. 61, and in particular, the need for a minimum diametral clearance of the needle rollers to the spider shaft. There is no reason to believe that either of the Kayser or Mangiavacchi joints was designed by any other than the conventional approach, which employs a clearance fit as described in the accompanying Manual.

In that Kayser and Mangiavacchi do not disclose an interference fit, and further in that there is no basis to infer an interference fit in either reference, the outstanding rejections of Claims 8 and 13 under § 103(a) are untenable and should be withdrawn.

Accordingly, this application is in condition for allowance and should now be passed to issue.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has

not been requested separately, such extension is hereby requested.

Respectfully submitted,

MWS:sjk
Miles & Stockbridge P.C.
1751 Pinnacle Drive, Suite 500
McLean, Virginia 22102
(703) 903-9000

By: 
Mitchell W. Shapiro
Reg. No. 31,568

December 16, 2005